

PROJECT HOPE

# IMPROVING MATERNAL CHILD-HEALTH IN THE HUALLAGA VALLEY OF PERU: A COLLABORATIVE PROJECT WITH THE CENTER OF PUBLIC HEALTH OF THE UNIVERSIDAD PERUANA CAYETANO HEREDIA AND THE SAN MARTIN MINISTRY OF HEALTH

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Ronald Reagan Building

1300 Pennsylvania Avenue

Washington, D.C. 20523

Submitted by:

The People-to-People Health Foundation, Inc.

(Project HOPE)

Millwood, Virginia 22646

Tel: (540) 837-2100

Fax: (540) 837-1813

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Contact persons:

Juan Carlos Alegre, M.S.

Program Manager, Perú

[jcalegre@projhope.org](mailto:jcalegre@projhope.org)

Bettina Schwethelm, Ph.D., M.P.H.

Director, MCH Programs

[bschweth@projhope.org](mailto:bschweth@projhope.org)

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## ACRONYMS

AB PRISMA	Asociación Benéfica - Project in Information, Health, Medicine, and Agriculture
ARI	Acute Respiratory Infection
CEPCO	Eastern Center of Studies and Community Promotion
DDC	Diarrheal Disease Control
CHV	Community Health Volunteer
CPH	Center of Public Health
CS	Child Survival
CURMI	Rainbow Institution (CURMI is a quechua word)
DIRES-SM	Regional Health Office-San Martin, Ministry of Health
ENDES	Encuesta Nacional Demográfica de Salud; National Survey of Health and Demographics
FADI	Amazon Foundation for Integrated Development
FP	Family Planning
HKI	Helen Keller International
HIS	Health Information System
INADE	Instituto Nacional de Desarrollo; National Institute of Development
INEI	Instituto Nacional de Estadística e Informática; National Institute of Statistics and Informatics
IPSS	Instituto Peruano de Seguridad Social; National Institute of Social Security
ITDG	Intermediate Technology Development Group
KPC	Knowledge, Practice, and Coverage
MCH	Maternal and Child Health
MINSA or MOH	Ministerio de Salud; Ministry of Health
NGO	Non-Governmental Organization
ORT	Oral Rehydration Therapy
ORS	Oral Rehydration Salt
PANFAR	Program of Food & Nutrition for High Risk Families
PASA	Program for Support of Food Security
PHC	Primary Health Care
PRISMA	Project in Information, Health, Medicine, and Agriculture
PVO	Private Voluntary Organization
RSM	Region San Martín
UBASS	Administrative Basic Unit for Health Services
UNDP	United Nations Development Program
UNSM	Universidad Nacional San Martín
UPCH	Universidad Peruana Cayetano Heredia
UROC	Oral Rehydration Units in the Community

## **CS-XII Perú - First Annual Report Project HOPE**

**October 1996 - September 1997**

### **BACKGROUND**

Despite social instability in some parts of Region San Martin (RSM), Project HOPE's Child Survival XII project started as scheduled, with project staff hired and working at field site in October 1996 in RSM, Perú. (see Annex 1). It was decided that the project would be executed in communities located in two provinces—Lamas and El Dorado—and the Basic Unit of Health Services (UBASS) Banda of Shilcayo. After recognizing all rural areas of the target provinces, 160 communities were identified to be served during the life of the project, with a total estimated population of 37,965: 13,202 children less than five years of age and 24,763 women of reproductive age. See Annex 2 for a further breakdown of estimated target population.

From the very beginning, the project work strategy was to involve DIRES-SM, local NGOs and community leaders in order to bring together all the members that will play a key role for the implementation and sustainability phases. A workshop was coordinated with technical personnel, from regional and local levels, to discuss the strategies and methodologies; the revision of interventions; the agreement of responsibilities undertaken by HOPE and DIRES-SM; and initial steps for the implementation of the project. The workshop yielded concrete achievements in institutional agreements that are aimed toward sustainability of the activities undertaken by the Ministry of Health.

Given the project's implementation approach, HOPE and the Universidad Peruana Cayetano Heredia (UPCH) signed an institutional agreement that delineates responsibilities and coordination between the two institutions for the successful implementation of the project. See Annex 3 for details on the agreements signed by HOPE, DIRES-SM, and UPCH.

Prior to the baseline survey, HOPE field personnel received training on qualitative research methods and a revision of survey implementation techniques. In addition, coordination meetings were held with DIRES-SM staff, representatives of local NGOs, and communities. Such meetings were of extreme importance to gain valuable information from local partners with years of experience working in RSM.

The data gathering for the baseline survey was completed in February 1997. The information was obtained from rural areas and included the participation of more than 370 households. The survey process was aided by the active participation of the health personnel at the regional level, as well as staff from AB PRISMA, Helen Keller International (HKI), and HOPE field and headquarter personnel.

The Detailed Implementation Plan (DIP) was written with data collected from the baseline survey, with the participation of counterparts and the beneficiary population. Other participants included the regional

health authorities, directors from the area and local levels of MINSA, and the community leaders; all of whom presented their problems and needs related to the project goals and the proposed interventions.

## 1. ACCOMPLISHMENTS AND CONSTRAINTS

### Accomplishments

As stated in the original proposal and in the DIP, the effort of CS-XII is in community organization, training and supervision of CHVs, training and motivation of MINSA field staff, and in community education.

#### 1.1 Project Planning and Organizing

The initial phase of CS-XII required planning and constant interaction with local partners, particularly with DIRES-SM, which offered its knowledge and health administration in the region. DIRES-SM' support through its network of health centers, posts, and hospitals in the region was critically important to identify communities to target in the provinces originally proposed.

After such support from DIRES-SM and further revisions, the project staff was able to specifically identify 160 communities that CS-XII will target over the life of the project. Table 1 shows the number of communities by province and by year. As states in the DIP, all communities will be organized and have CHVs by Year 3, leaving Year 4 to reinforce efforts in all communities.

**Table 1**  
**Revised Phase-in Plan of Target Communities by Province and Year**

<b>Provinces: # of communities</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Total</b>
Lamas: 21	21	0	0	21
El Dorado: 50	29	21	0	50
B. of Shilcayo: 89	35	39	15	89
Total: 160	85	60	15	160

After the DIP implementation, it was possible to identify communities that will be serviced by the project. HOPE staff were grouped in teams and responsibilities and geographic areas were assigned for each province according to the number of communities to be targeted in Year 1. By the end of September 1997, HOPE staff implemented project interventions in 85 communities (see Annex xx for a detailed list of communities). However, due to migration, new communities are being established in all target areas, but especially in El Dorado, which could register up to 30 additional communities in the next two years, and in lesser scale the other two target areas. Therefore, it is expected that at the end of the project, CS-XII will target more than 160 communities currently planned. As a result of such potential increase, a careful monitoring on costs and expenses will be done. Table 2 summarizes the accomplishments by intervention in these communities by the end of September 1997.

**Table 2**  
**Accomplishments by Intervention or Activity by End of First Year**

<b>Intervention or Activity</b>	<b>Accomplishments</b>
Community Organization	52 communities organized with health committees 135 health promoters trained in community organization 85 communities with health promoters actively working 61 communities working on a variety of projects
Exclusive Breast-feeding	135 health promoters trained 2 messages produced 10 support groups formed
Nutrition	118 health promoters trained in nutritional value 118 health promoters trained in nutritional monitoring 135 health promoters performing nutritional monitoring 84 communities with growth monitoring for children less than 5
Micronutrients	118 health promoters trained in micronutrient deficiency
Diarrheal Diseases	118 health promoters trained in diarrheal diseases control 78 communities with working UROCs 118 health promoters trained in appropriate food practices and prevention
Family Planning	118 health promoters trained in promotion of contraceptive methods

In addition to the above list of accomplishments, CS-XII is currently analyzing the fortification of a local product with the technical support of CURMI. Two products have been identified for testing: cocoa and banana flour. These products would be fortified with heme iron. Design, production, implementation, distribution and impact of such fortified product are being carefully analyzed with CURMI technical staff. Governmental (PRONAA) and non-governmental institutions (UNSM and NOVA) have expressed their interest to participate along the different phases of this process. In addition, further funding from other institutions will be sought given the interest and collaboration expressed from other partners. It is expected that cost recovery might be needed to implement the distribution of the final fortified product.

## **1.2 Training Activities**

Training activities were performed at three levels:

Project personnel  
DIRES-SM staff  
Local NGO partners

Table 3 summarizes training activities during the first year of the project.

### **1.3 Community Participation**

One of the key aspects during the implementation of planned activities during the first year of the project is the active participation of the community. The response to community meetings have been overwhelming. In many instances, community members called other communities to participate in HOPE's sessions. HOPE field staff state that these communities—located in total rural areas with difficult access to health services—become very receptive as they rarely receive any type of community health service in their areas.

The primary accomplishments from the community process have been:

- tackling of the health problems with the participation of three groups of actors: HOPE staff, MOH, and community personnel;
- commitment of the institutional personnel to improve their attitudes towards the volunteer's work and participation;
- adoption of methodologies that utilize community resources;
- participation of community personnel in the selection of health volunteers;

The project is currently working with 135 health volunteers and 60 MOH personnel, all of whom will be constantly trained in all project interventions towards the accomplishments of benchmarks and sustainability.

### **1.4 Technical Assistance Received**

Table 4 shows the technical assistance received by HOPE personnel during the first year of project implementation.

**Table 3**  
**TRAINING ACTIVITIES**

ACTIVITY OR EVENT	PARTICIPANTS BY INSTITUTION			INSTITUTION RESPONSIBLE	MONTH	FACILITATOR
	HOPE	MINSA	OTHERS			
Qualitative Techniques	8	1		HOPE	November	Rafael Tapia
Accounting and Administration Systems	1			HOPE	November	Olga García
Food Consumption Method HKI/ Hemoglobin	8			UPCH-HKI	December	Luis Benavente/Susan
Training in Survey Techniques	8			AB PRISMA	January	Giovanna Baltazar
Sustainability Workshop	1			HOPE	January	Luis Benavente
DIP Planning	10			HOPE	February	Judiann McNulty
Community Organization	8			CEPCO	March	Lenith Herrera
Community Participation Techniques	8	3		CEPCO	March	Maribel Becerril
First Aid / Delivery Treatment	8			MINSA	March	Raúl Arroyo Tirado
Nutrition, Breastfeeding and Weaning	8	7		HOPE-UPCH	April	Marilú Chiang (AB
Geographical Information System	4	1		UPCH	April-May	Grimanesa Gómez de la
Social Marketing	8	6	3	HOPE	May	Mario Vildósola (U. de
Home Consumption Survey ( Lima )	2			AB PRISMA	May	Marianela Miranda
Home Consumption Survey ( Tarapoto )	8	6		HOPE	May	Luis Benavente
Adult Education	9	5	6	HOPE	May	Richard Crespo
Control of Dhiarreal Diseases	8			MINSA	June	Rosario Ruíz Santillán
Monitoring and Evaluation of Health Programs	9	12	1	AB PRISMA	October	Luis Segura
Total Quality Control	9	20		HOPE	October	Italo Orihuela (Defensa



**Table 4**  
**Technical Assistance Provided to HOPE personnel**

<b>Type of Consultancy</b>	<b>Institution Responsible</b>	<b>Person(s) Responsible</b>	<b>Description</b>
Planning & Start Up	HOPE	Judiann McNulty/Luis Benavente	Training in qualitative data and analysis.
Information Systems	HOPE	J.C. Alegre	Design of HIS
Baseline Survey	HOPE/UPCH/AB PRISMA	Judiann McNulty/Luis Benavente/Giovanna Baltazar	Design of the DIP
Micronutrients/Dietary Survey	HKI	Susan Burger	Design of the dietary survey and micronutrient concepts
Micronutrients/Hemocue Use	UPCH	Luis Benavente	Micronutrient concepts and usage of Hemocue during Baseline Survey
Infant Nutrition	AB PRISMA	Marilu Chiang	Basic Concepts on intake dietary practices
Qualitative Techniques	U. Catolica del Peru	Rafael Tapia	Survey implementation and qualitative methodology.
Community Organization	CEPCO	Lenith Herrera	Concepts and methodology for organizational techniques at the community level
Participation Techniques	CEPCO	Maribel Becerril	Concepts and methodology for participation techniques at the community level
Epi Info/Data Analysis	DIRES-SM	Antonio Carrasco	Setup of databases and basic statistical analysis
Adult Education	HOPE	Richard Crespo	Non-formal adult education techniques
DDC-UROCs	DIRES-SM	Rosario Ruiz Santillan	UROCs implementation and administration
Social Marketing	U. de Lima	Mario Vildosola	Social marketing of fortified food

			at the community level
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## 1.5 Coordination with Other Project Partners

The implementation of CS-XII in Region San Martín has demanded the interaction with many local institutions that have been working in the Region for years and thus, be able to provide their expertise for the successful implementation of CS-XII interventions. Table 5 shows the coordination with other project partners that are participating with HOPE in the design and implementation of interventions. In addition, Annex 3 shows the institutional agreements signed between HOPE and UPCH and DIRES-SM as they are the main partners in the CS-XII project.

### COORDINATION WITH OTHER PROJECT PARTNERS

PARTNERS	ACTIVITIES
AB PRISMA	Training on baseline survey and nutrition to HOPE staff Provision of forms to register nutritional monitoring Sharing of equipment and supplies for baseline survey
CEPCO	Training on community organization to HOPE staff Information on cost recovery and income generation Support to training sessions
CURMI	Technical support and training on fortification of food Participation in planning of community meetings Providing information of technology for food processing
DIRES-SM	Coordination with Planning and Project Office Training of regional MOH personnel Participation of DIRES-SM technical personnel in planning activities Coordination of shipment of donated de-worming pharmaceuticals for target region valued at \$177,112 surpassing the match agreed in original proposal (\$20,000) Sharing of baseline results and sanitary systems to DIRES-SM DIRES-SM personnel involved as trainers and supervisors of CHVs Participation in planning of community meetings Providing residency for students rotations Providing office space for HOPE field office
ITDG	Providing digitized maps Sharing information on food processing technology Guests at HOPE's technical assistance sessions
PROYECTO HUALLAGA CENTRAL & BAJO MAYO	Support for design of community planning in El Dorado
LOCAL GOVMNTS.	Support from municipalities for CHVs training sessions

Direct cash support for training sessions

The Catholic Church, the National Police and CARITAS del Perú , and mother's clubs have also contributed in lesser scale in a variety of activities performed by project staff.

### **Constraints**

During project implementation, there have been no major obstacles for programmed activities. Administrative delays were not experienced thanks to the on-time startup and the continuous support of DIRES-SM from the very beginning.

### **1.6 Human Resources**

One of the main constraints found throughout the implementation of program interventions has been to be able to find human resources willing to work in rural and isolated areas. The 85 communities served during the first year of CS-XII lack many of services that urban and peri-urban settlements enjoy. Once project staff was hired, it was quite challenging for the personnel who are in direct contact to communities to get used to sometimes extreme working conditions inherent to rural areas: long hours to reach communities due to bad road conditions or simply lack of roads at all; apathy and distrust showed by community members at the beginning of the project; and adaptation and assimilation of cultural aspects proper of the region by project staff.

It is important to mention the expertise showed by the Program Coordinator, Aquilina Palomino, who had the required experience from working in similar conditions in other parts of Region San Martín. Ms. Palomino's support was critical when dealing with difficult working conditions experienced by young, yet dynamic and tenacious field staff. It was extremely difficult to find staff with the required level of knowledge and responsibility to work in rural areas like Region San Martín.

### **1.7 Geography of the Area**

The geography and its climate did not contribute at all towards suitable working conditions. The target areas has tropical weather conditions most of the year, with extreme temperature that oscillate between 100°-120°F at the shadow. In addition, the dispersion of the communities makes logistical tasks quite a challenge. In order to reach communities in the UBASS Banda of Shilcayo, project staff utilize the project vehicle, a motorboat, and hours of walking to reach a great number of communities dispersed along the Huallaga river.

### **1.8 Lessons Learned**

One of the lessons learned throughout the first year of operations is the inclusion of all players from the very beginning. Without the support and coordination of DIRES-SM, local NGOs and community leaders and members, the project would have not achieved the results obtained in the first year. Of particular importance was the interest of MINSA through DIRES-SM , and the technical support of UPCH during the DIP, its analysis, and interpretation of results.

The baseline survey provided extreme and critical information of target areas and communities. Such information was determinant when designing methodologies to adopt for the implementation of interventions in specific target regions.

Finally, the planning prior to the implementation of the DIP helped to clarify methodologies and strategies to follow. And the post-result analysis allowed a work plan for successful implementation of activities.

## **2. SUBSTANTIAL CHANGES IN PROJECT DESIGN**

The total number of communities to target have been reduced from 190 to 160. However, due to constant migration in the target provinces—especially in El Dorado—is expected that CS-XII will target close to 200 communities throughout the life of the project. If the number of communities increase more than expected, a revision of programmed activities along with human resources and budgetary changes to attend such increase will be performed. Project HOPE will keep USAID informed regarding any changes as a result of increases of communities in target areas.

DIRES-SM has expressed concern regarding levels of malaria registered in the Region, especially in UBASS Banda of Shilcayo. Project HOPE will work together with DIRES-SM to assess the possibility to include such intervention after a review of technical and budgetary needs.

As of the end of the first year of CS-XII implementation, there have been no changes in the budget.

## **3. RESPONSE TO THE DIP REVIEW**

As per BHR/PCV's letter of July 9, 1997 concerning issues raised during the DIP review, find below the responses:

ISSUE No. 1: Describe the coordination with other project partners i.e. PAHO, MINSA, BASICS, etc. especially with regard to IMCI

RESPONSE TO ISSUE No. 1: See Section 1.5 for details regarding coordination with other project partners. With regard to IMCI, HOPE's CS-XII is cooperating indirectly by promoting campaigns and messages that are part of IMCI organized by DIRES-SM in Region San Martin. No direct involvement exist between HOPE's CS-XII and IMCI programs.

ISSUE No. 2: Describe communication focus on mothers, grandmothers, and other caretakers, i.e. where and how this will take place.

RESPONSE TO ISSUE No. 2: CS-XII emphasizes the use of CHVs who are community members that will be performing the direct contact with members of their own community, then facilitating the direct contact with mothers and other relatives or caretakers who are constantly close to the children.

## **Response to DIP Technical Review No. 1**

### **CSXII DETAILED IMPLEMENTATION PLAN (DIP) SUMMARY OF DIP STRENGTHS AND WEAKNESSES**

**Reviewer: Dr. Patricia Paredes**

#### **PART A - STRENGTHS**

The area in which the project will be implemented is an area that needs inputs to strength the services. Difficulties in access, scarce sources of adequate food supply to diversify diet, and the social and moral impact left by the terrorist activities and the continuous confrontations between drug dealers and the army, determine the need of these populations to receive the support of programs to enhance a process of development.

As this is also an area where other projects of USAID are in effect, positive outcomes may be potentiated.

The project efforts focus on supporting the development of local organizations. As activities include the process of getting autonomy and generate (or be prepared to look for) further support the likelihood of sustainability of the proposed interventions may be increased.

The collaboration with academic institutions such as the universities establishes a unique opportunity for students to learn about the real conditions where health care has to be provided. This is not only true for the medical students but also for students of the local university who may benefit from hands-on practice and the applicability of the techniques that they master. Furthermore, the expertise of the institutions involved in the collaboration enriches the project and makes it more likely to succeed in the implementation and achievement of its goals.

There is good recognition of the limitations of the project to avoid starting efforts that cannot be continued after the funds are over. Also the strategy of convincing local salt miners to iodize their salt instead of acquiring the product from outside shows that they are making good use of the resources and even more, helping the local economy.

The area of breastfeeding promotion and diarrhea had very clear explanations of the techniques to be used and the stages that people have to pass through to adopt the recommendations.

For diarrhea the issue about differentiating whether fluids and breast milk are given in less amount due to lack of appetite or because cultural reasons is very important and has been considered.

The description of the implementation plan to improve diarrhea case management is clear and uses innovative techniques (self-evaluation of health care providers, using community committee for diffusion at local events). The community approach to deal with diarrhea case management is the best strategy because it considers the social and cultural realities of the treatment decision and do not see the caretaker as isolated individual.

The level of awareness of family planning methods is incredibly high, as well as the reported use. If this is the case, how is the high fertility rate explained? Would it be possible that the use of the methods is not in continuous basis?

Some areas of the family planning activities are very good, such as the emphasis on increasing self-esteem. However, it needs more input of experts in the area (see weaknesses and recommendations).

## **PART B - WEAKNESSES/AREAS FOR IMPROVEMENT/RECOMMENDATIONS**

Although major areas of child survival are included in the activities proposed, there is no explanation why improving level of immunization has not been considered, given the low level of immunization coverage, particularly in Lamas and Banda del Shilcayo.

It is not clear how will the project reach those undernourished children who do not come for immunization.

*The reviewer might have just looked coverage rates in the very first table of the DIP (Section C, pag. 5). This table registers under-reported rates. Initial coordination with DIRES-SM let us to believe high coverage rates in RSM. This was further confirmed during the baseline survey and registered in the DIP (Appendix B, Key indicators), which shows coverage rates above 90%.*

There is reference to supplement diet with Title II Food. What are the products included in this Title II? Are they culturally accepted? Are they acceptable for children? Will the Vitamin A and iron fortified weaning food be accepted in the area? (peas are not common in this area).

*CS-XII is not involved with the USAID Title II Food program. AB PRISMA, with funding from USAID, is implementing PANFAR, a program that distributes Title II foods in the region: upper and lower Huallaga valley, and also in some communities of HOPE's CS-XII target area (Lamas and El Dorado). Foods distributed under this program are: soy, arveja, oil, and corn. AB PRISMA also distributes "Panfarcito," a powdered mix of corn and soy—not peas as mistakenly indicated in the DIP.*

How is it that HOPE will develop indicators for nutritional improvement? Will these indicators different than the usual weight/height for acute malnutrition or weight/age and height for age for chronic malnutrition?

*HOPE's CS-XII plans to perform periodic anthropometric activities in children. It will also monitor other indicators (i.e. morbidity rates in infants and children) to indirectly measure nutritional status in target population.*

"Basic Messages" such as "Vitamin A, protein, iron and calories" are expected to be translated to culturally appropriate terms to suit people's expectations. It is advisable that even CHVs and field staff are trained on the use of local terms to refer to these nutrients, to avoid repetition of technical terms of the population.

***Technical terms ( i.e. protein, anhemia, calories, iron, etc.) will be translated into culturally known terms in order to be fully understood by the community. CS-XII auxiliary nurses are from RSM, so they will help to identify the correct terminology to use.***

I am interested to learn more about the “effective adult education and counseling methods” in which CHVs and field staff will be trained. They need to be consistent with cultural patterns of information transmission and avoid the classical “classroom type” lecture. How do you define “educational presentation”?

***CS-XII staff received training on effective techniques for adult education. MOH personnel and NGOs staff also attended the training session, and their input, along with the CS-XII auxiliary nurses who are native, helped to adjust adult education techniques to the Region’s cultural patterns and idiosyncrasy. The educational presentations performed by the staff at the communities were very informal, used simple terminology according to the level of education of the community, and established a level of relationship in which both, project staff and community members, feel comfortable.***

According to the emphasis put in the education component, I get the impression that the designers (conductors) of the project have already an underlying assumption that information transmission will lead directly to changes in patterns of food intake and adoption of other recommendations. Did I get it right? If this is not the case, what stages are needed for information to be used?

***Changes in patterns of food intake and adoption of recommendations are not expected to occur in the short range. CS-XII heavily relies on continuous community organization, training, and supervision of CHVs throughout the life of the project, with the support of DIRES-SM and local NGOs, towards the achievement of benchmarks and sustainability.***

I would like to get more information on how you will define “quality”: Will it depend on capacity to perform what is being taught? Or, retention ability and recognition of concepts?

***Quality will depend on the capacity to effectively convey messages, and based on these effective educational techniques, adapted to the region, community members will be able to retain, recognize, and ultimately apply the concepts taught.***

Related to growth monitoring activities, I would suggest that the messages provided to mothers include the reasons for weighing their children more than once to motivate their collaboration. This explanation may decrease expectations to receive supplements but it may provide them with a better understanding on the importance of this activity.

Furthermore, when a child is in a normal range or even higher than normal, counseling should be provided. Informing the caretaker of what is appropriate nutrition and using her own diet pattern as an example to reinforce what she is already doing correctly, may motivate her to provide advice to peers and prevent her from changing good habits in the future.

***Project HOPE agrees with the suggestion to include the reasons for weighing children more than once when providing messages to mothers. The project will have scales available to weigh children more than once.***

In Diarrhea Case Management: The level of dysentery found is very high compared to the usual in the rest of the country and international data (5-10%). It may be important to find out if dysentery, in this case, is associated to local hookworms instead of shigella to prevent overuse of antibiotics and ensure provision of adequate treatment.

***Based on other experiences in RSM, dysentery is mostly caused by shigella rather than hookworms.***

It is surprising that 50% of cases sought attention, when this does not occur even in the urban areas where health services are more accessible. Is this high level of treatment seeking a goal of the project? Would not it be better to improve recognition of cases that do need assistance? It is important to include some kind of intervention to decrease the unnecessary use of drugs in general, and particularly of antibiotics.

***Even though the baseline survey found that nearly 50% of diarrhea cases sought attention, the project will emphasize and encourage community health committees to identify the causes of diarrhea. The project will also train primary school teachers to teach students the most basic messages for preventing dehydration and improve hygiene and sanitation. Joint efforts with DIRES-SM will also be made towards decrease unnecessary use of antibiotics.***

I would like to suggest the team to explore the use of “Chapo” (banana coccion) as a home fluid to be used when diarrhea is present. It is used in central areas of the Amazon (Junin), and it has a carbohydrate content from the banana. Children drink it very frequently during the day in cups. Given the connection with the UCPH, electrolyte content can be performed to assess its adequacy to promote it as home fluid during the episode.

***Although “chapo” is commonly used, the program will rather emphasize the intake of fortified foods prepared under the required hygienic conditions. “Chapo” is prepared mostly at home in villages and towns, with no minimum hygienic conditions.***

What is the situation about clean water access in the villages along the Banda del Shilcayo? What proportion of homes have a latrine?

***There is no access at all of drinkable water in communities located in UBASS Banda of Shilcayo. Some communities in El Dorado and Lamas have restricted access to clean water. In addition, some homes have been able to build latrines with the help of the church or FONCODES. However, latrines are not widely used due to the lack of an aggressive information campaign.***

About FP activities: This is a weak area in the DIP. It may need the input of experts. Given the high level of awareness, promotion and education may not be enough to ensure adoption. Issues, such as marital relationships need to be explored, as men fear of being betrayed seems to be a major barrier for adoption of methods in other areas. Men’s perceptions about the benefits of using methods should be explored. The cultural definition of masculinity, the importance of the number of children, and their relationship with power or strength according to cultural norms should also be explored. The intervention in this case needs to address men, in groups or the couples, not only the woman. It is important to move gradually in this

sense, and try to establish first a mutual consensus among men that does not threaten their masculinity. This because if attempts are made to talk in couples directly, the woman may suffer reprisals of the man, if he assumes that his power to decide or his masculinity has been debilitated by talking private issues in front of others (CHVs, health personnel, etc.).

Also, adequate information about side effects should be provided to women. Awareness of existence of methods do not guarantee that they are well informed of their effects in the body, and fears related to this issue seem to limit the use of methods in other settings. Also, how methods work should be clarified to ensure adequate use (pills should be used every day, etc.).

If early marriage or early sexual relationships are the norm, teachers may need to be trained not only in physiological or anatomic issues, but also about how and when pregnancies can occur. It may depend how open is the social environment to talk about these issues, if the children are taught at home, or they just observed, or if they have myths about how pregnancies occur (kissing, etc.). In summary, the intervention needs to focus in adolescents who are in more risk to become pregnant.

***FP is the intervention with the least amount of effort in the project (10 percent). Although it may seem weak from the DIP, FP activities have been coordinated to complement aggressive programs done by other NGOs and DIRES-SM. At the request of DIRES-SM, the project will limit its FP activities to promotion of FP techniques in rural areas. As stated in the DIP, project staff will receive training in FP methods as well as promotion and education for an environment that is characterized as highly “machista.” Cultural issues like masculinity, importance of number of children, and their relationship with power or strength will be carefully included. Since a high risk population was found from the baseline survey—6 percent of mothers are under age 18—the program will also train teachers in FP issues, ranging from sexual relations, self esteem, goal setting, through child spacing, use of FP methods, and danger of early pregnancy.***

All the issues mentioned are difficult to manage with mass information campaign and need to be discussed in small groups or in one-to-one basis to solve doubts. Even if supplies are available, adequate use may be limited by lack of understanding on how the pills or other contraceptives work, and therefore, distort report of use and result in high fertility.

## **Response to DIP Technical Review No. 2**

### **CSXII DETAILED IMPLEMENTATION PLAN (DIP) SUMMARY OF DIP STRENGTHS AND WEAKNESSES**

**Reviewer: Dr. Sandra Huffman**

#### **PART A - STRENGTHS**

This DIP is very well thought out and has numerous strengths. The project is working in an area of great need and Project HOPE has developed an efficient way to work with the local MOH to improve services and expand interventions to the community under quite difficult conditions.

The focus on nutrition is important and the interventions to address malnutrition are good ones. Their concern for supporting the needs of the health system for sustainability are laudable. The interventions to promote breastfeeding are appropriate and the emphasis on improving micronutrient status also high priority. Their suggestion to work with the MOH and help them prioritize who should receive vitamin A and iron is excellent.

The promotion of LAM is a wonderful idea, especially since this addresses two clear health issues (low rates of exclusive breastfeeding and a high proportion of women -- 40% who want to space but are not using contraception).

The idea of using CHVs and expanding the numbers available is an important intervention. Delineating the supervision load that this would present on the MOH staff and how this will be resolved might be useful (e.g., a flow chart with the number of CHVs per supervisor, as the numbers increase, and how time to supervise will be set aside and how transport will be arranged and time for this transport could be useful). With the estimated 400 volunteers (one couple) in each community, the supervision load on the staff may become difficult, given the proposed supervision of once per month. Has the use of couples ever been tried or were communities asked about how they liked the idea?

The staffing pattern is excellent with clearly highly qualified staff in Peru and at Headquarters and excellent institutions (Prisma, UPCH, etc.). The maps are clear and illustrate the large amounts of time needed to travel to each community.

The delineation of simple messages for each of the interventions helps make it easier to develop interventions. One concern is that recent studies (done in Peru by the UN) have shown how difficult it is to increase the iron content of a young child's diet without the use of liver or fortified foods. Thus promoting iron rich foods and vitamin C is unlikely to be able to have a major impact on anemia.

A major strength of this project is the baseline survey. It has served as an important tool to understand the prevalence of vitamin A deficiency in this area, for which data were not obtained previously. This will be extremely useful for the government of Peru as well as the local MOH and the Project. The amount of work that went into this survey and the high quality of the data are quite impressive. Because of the great deal of data that were collected, it would be very useful to conduct additional analyses, or at least provide them if they have already been conducted (even if they are in Spanish). For example, it would be useful to show the excellent data collected from 24 hour recall on foods consumed in the preceding day for children 6-23 months and weekly for those over 23 months. The data for the younger ages should be broken down by age (6-11, 12-17, 18-23 months).

The project provides extremely useful information on iodized salt and is innovative in how it is trying to increase its use. However, they do not mention the probable reason that people buy the uniodized salt (lower cost or greater access). Another way of working with the salt mine to encourage them to fortify the salt rather than just enforcing the legislation is to ask OMNI for technical assistance for them or to at least link with the micronutrient government program in Lima. There may be technical issues that the mine would need help with that are the reasons for their not complying with the legislation.

## **PART B - WEAKNESSES/AREAS FOR IMPROVEMENT/RECOMMENDATIONS**

1. There are some confusing questions/results in the baseline survey:

A) What is the sample size used in the analyses of indicators? In the key indicators section, the denominator does not seem to match the data. There were 307 kids in the total KAP, but on the exclusive breastfeeding question only 118. It appears that there were 55 kids 6-11 months ( $17.9 \times 307$ ), and 151 12-23 months ( $49.2 \times 307$ ), for a total of 206 kids < 24 months. The number of women used in the family planning question is 214, and since this figure is greater than 206, it must be from the total 307. By using different data sets for the analyses, the later comparisons to the mid-term and final evaluations will be confusing unless it is clarified as to which set of children are included and why. How were kids who were not breastfed handled in the questions on breastfeeding during diarrhea ( $n=205$ , but there should only have been 206 kids in total and many were not breastfeeding; maybe this is of all kids under 3 who had diarrhea)?

***For midterm and final surveys, all different denominators will be explained for clear understanding.***

B) Question 15. At what age did the child start to receive...specific foods/liquids.

While I have concerns about using a question like this based on recall, it would be useful to analyze the data by the age at which mothers reported giving each of the foods/liquids asked about. The report suggests that the only non-milk liquids were given to the infants and then solids given a little later, but no data separating these are shown.

C) Question 16. What foods should children under two receive? Since < 6 months is under two, and they should only get breastmilk, this question could be difficult to interpret as to what are correct answers.

***This question will be reviewed and asked differently in midterm and final surveys to avoid misleading interpretation.***

D) Results are mentioned on the number of meals kids < 24 months were fed, but I can not find where this question was asked. Instead it seems to have been interpreted from the 24 hour recall, but the results are not shown. Is a meal considered a time/day that the child received any food out of 6 possible times? Or did the child have to receive several items to be considered a meal?

2) Focus on exclusive breastfeeding but design of KAP to exclude kids < 6 months.

I do not think that the recall data will provide sufficient detail in results to illustrate an impact of the program on exclusive breastfeeding even if it is quite successful. For example, the program could have major success in reducing the use of unboiled water (lets say from 70% to 20%) and no success with manzanilla (80% to 70%), but manzanilla may only be given in the first month and very little in later months, while water could be given daily in larger amounts. This major improvement in the program would not show up with the current question.

I would strongly urge adding children under 6 months to the mid-term and final evaluation, so that you will at least be able to assess changes in exclusive breastfeeding rates. This will also allow a comparison of the results of the old question to the new question to see if you can tease out what information the old question provides. The 24 hour recall that is currently being asked would then be asked of the younger infants as well, providing the needed data on current practices. This would mean about 60 more children, 10 (Lamas), 15 (El Dorado), and 36 (Banda Sh). With this number, it would be best to analyze the data for the entire group (< 6 months). If you could include an additional 60 kids, the data on practices could be broken into those 0-2 and 3-5 months which would be very helpful, as you could have major improvements in exclusive breastfeeding in the early months when it counts the most.

Since exclusive breastfeeding promotion is 25% of the project, it would be helpful to have a mechanism to evaluate it more adequately. You would not need to collect bloods for anemia from these infants if not desired.

***Children less than six months of age will be included in midterm and final surveys.***

Also it will be important to conduct some focus groups to figure out what liquids are given and how often and why (herbal teas, plain water, sugar water?). There may be a difference as to what liquids are given when (i.e., manzanilla in the first month to soothe colic - which will take very different messages than water given to prevent thirst).

3) Because weight for age and height for age are so dependent on height (and stunting) it will be difficult to see differences in nutritional status, since after 18-24 months, it is difficult to affect height. It will therefore be important to look at differences by age 6-11, 12-18, 19-23. This illustrates the same concern for the ages included in the KAP. It could have been easier to see results if kids < 24 months rather than < 36 months were included (since breastfeeding will not be affected in the older kids, and probably not w/age; only anemia and vitamin A are likely to be measurable in the older kids).

4) There are some things that are contemplated that are quite interesting but that the staff is not trained in: solar drying of fruits, and the production of a fortified snack. While the sale of a product that will increase iron intake is a unique idea and quite interesting, there are so many nutritional, technical, commercial and marketing issues involved, that it could detract from the project. I understand the UPOCH will be the primary group working on this, but their expertise in these areas (other than in nutritional issues) is not in evidence. Some issues that should be considered is 1) the calorie content of the food; 2) cost compared to the cost of a supplement that could be sold; 3) access to cash for the purchase in contrast to the frequency by which the consumption needs to take place (daily vs. weekly); 4) type of food (liquids that could interfere with breastfeeding in contrast to a high calorie snack that could fill two needs at once, where and what the fortificants will be obtained; 6) where heme iron will be obtained and how it will be stored, used, hygienically, etc.

***With regard to the fortification of foods, the project has selected two potential products to be fortified: cocoa and banana flour. The fortification would be done with heme iron. All technical aspects for the production of such fortified product—design, nutritional value, testing, production, quality control, distribution, social marketing, etc.—will be done with the technical support of CURMI and, more recently, UNSM. A cost analysis will also be performed and sources to obtain***

*ingredients not found locally will also be evaluated. There are institutions that have expressed their interest in participating in the development of such fortified food. Upon the completion of the evaluation of all these aspects, one product will be selected for its distribution in one province of HOPE's CS-XII.*

## **ANNEX 1**

### **LIST OF HOPE STAFF**

### **Project HOPE Child Survival XII Staff**

Dr. Luis Benavente*	Program Director
Lic. Enf. Aquilina Palomino	Program Coordinator
Oscar Villafuerte	Nutritionist
Miguel Campos*	Information Specialist
Nancy Garcia	Nurse/Health Educator
Jessica Ventura	Nurse/Health Educator
Ana Quijano	Nurse/Health Educator
Azucena Rios	Auxiliary Nurse/Health Educator Assistant
Eda Huanca	Auxiliary Nurse/Health Educator Assistant
Martha Paima	Auxiliary Nurse/Health Educator Assistant
Wellington Arevalo	Administrator
Rebeca *	Administrative Assistant
Eduardo Zambrano	Driver

\* Part-time, based in Lima.

All employees are salaried, full-time, host country nationals, and based in Tarapoto, San Martin.

## **ANNEX 2**

### **PROJECT BENEFICIARY POPULATION**

## BENEFICIARY POPULATION BY AGE GROUP

Population by Age Group	Estimated Beneficiary Population
Infants less than 12 months of age	2,581
Children between 12 and 23 months of age	2,615
Children between 24 and 59 months of age	8,006
Total Number of Children less than 59 months of age	13,202
Women of reproductive age	24,763
<b>TOTAL</b>	<b>37,965</b>

## **ANNEX 3**

### **INSTITUTIONAL AGREEMENTS**

## **ANNEX 4**

### **LETTERS OF SUPPORT**